

Title (en)

OPTICAL POSITION SENSOR USING FARADAY EFFECT

Publication

EP 0319172 B1 19920909 (EN)

Application

EP 88310870 A 19881117

Priority

- JP 5182488 A 19880304
- JP 30381387 A 19871201

Abstract (en)

[origin: EP0319172A2] An optical position sensor comprising: light emitting means for emitting a light; first guiding means connected at its one end to said light emitting means and adapted for guiding said light emitted from said light emitting means; polarizing means (96) connected at its one end to the other end of said first guiding means and adapted to convert said light into a light having a unitary plane of polarization; a Faraday effect element (97) connected at its one end to said polarizing means and having reflecting means (98) at its other end; a movable magnetic scale (83) disposed in opposed relationship to said reflecting means and having a plurality of magnetized segments (99a to 99g) mounted thereon, the unitary plane of polarization being optically rotated in accordance with the arrangement of said magnetized segments; polarization detecting means (100) connected at its one end to said Faraday effect element in parallel relationship to said polarizing means and adapted to pass therethrough a light wherein the plane of polarization thereof is not optically rotated; second guiding means connected at its one end to the other end of said polarization detecting means and adapted for guiding the light from said polarization detecting means; and opto-electric converting means connected to the other end of said second guiding means and adapted for converting the light guided by said second guiding means into an electric signal.

IPC 1-7

G01D 5/34

IPC 8 full level

G01D 5/34 (2006.01)

CPC (source: EP US)

G01D 5/345 (2013.01 - EP US)

Citation (examination)

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Cited by

EP2664897A1; CN102295203A; US5434934A; EP0627613A3; US7171330B2; CN1324302C; US7110123B2; WO2004029556A1

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